

# THE CAMERA CRAFTSMAN

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NATIONAL CAMERA REPAIR SCHOOL

Volume I      Number 4

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## *Student of the Month!*

WALTER J. HUSBAND  
Hesperia, Michigan

Mr. Husband was selected as the "Student of the Month" by the NCRS Faculty for his excellent Lesson Eleven on "The Escapement Retard Shutter".

The lesson submitted gave evidences of careful and diligent work based on a thorough understanding of the principles and theory outlined in the Text.

In addition to an excellent diagram of the "Cycle of Operations", Mr. Husband submitted detailed drawings and descriptions of the various shutters studied to date.

Editor's Note: Congratulations, Mr. Husband. Your Credit Reward Slip is in the mail. Maintain that excellent standard of work.

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### **Faculty Suggestion of the Month:**

"A BASIC RULE IN CAMERA REPAIR AND ASSEMBLY"

Remember to test your assembly as each part is replaced. Only in this way can you be sure that the Shutter or Camera Assembly will operate properly after it is completely reassembled.



### Faculty Suggestion (Continued)

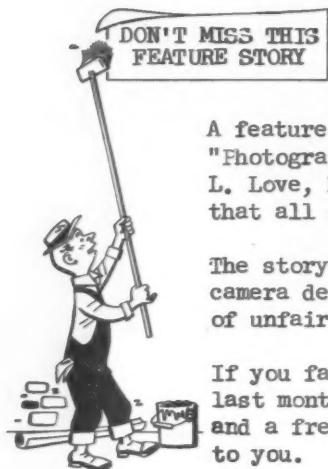
A completed brick wall will not be straight unless each brick is properly aligned with the one placed before - testing the alignment must be done constantly as the work progresses to insure a successful finished job.

When a part is placed in position and the assembly fails to operate correctly - you immediately know where to look for the possible trouble - right there in the last piece you added to the assembly. If the operation is not tested until the assembly is completed you may find it necessary to remove all the parts again to locate the faulty one.

Form the habit of applying this rule to every job you tackle - test for proper functioning as your reassembling progresses. It will pay dividends in time, effort, and temper saved.

Remember, NCRS training is still your best substitute for expensive experience.

----Your NCRS Instructor



A feature story appeared in the May '55 issue of the "Photographic Trade News" magazine written by Samuel L. Love, Director of NCRS. We strongly recommend that all students make it a piece of required reading.

The story deals with how many "legitimate" retail camera dealers are effectively combatting the practice of unfair retail "discounters".

If you failed to get your copy of the PTN magazine last month, please write to the school Registrar and a free reprint of the article will be mailed to you.

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■ Money you earn as a Camera Repairman may easily pay for your entire course while you are learning!

## NEW JOBS AVAILABLE.....

Students and friends of NCRS frequently learn of new job opportunities in the camera and allied fields in their own localities. They are requested to notify the School Placement Service Department whenever they learn of an existing need or a job opportunity for a trained graduate Camera Repairman. At graduation time all students are entitled to free assistance from the NCRS Placement Service Department in helping them to successfully establish themselves in business or locate good paying positions. This is another student service NCRS offers without charge whenever needed.



The Placement Service Department received an urgent call this past week from Mr. Arendt of the National Audio-Visual Association informing us of their great need for qualified Sound Projection Repairmen. NCRS plans to help Mr. Arendt fill these vacancies with trained NCRS graduates.

## NEW REGISTRAR APPOINTED AT NCRS

Mr. Bernard H. Love BSE was elected on May 15 to the position of Registrar of the NATIONAL CAMERA REPAIR SCHOOL in Englewood, Colorado.

Mr. Love brings a rich and varied background of educational experience and training to his new post with NCRS. Early in his career he served as a High School Instructor with the School District of Philadelphia. While with the United States Army he served as a Chief Instructor in the Officer Training School located at Fort Lee, Virginia. In Germany with the Army of Occupation he was appointed as the Director of the Supply Training School located in southern Bavaria.

As the new NCRS Registrar Mr. Love will be in charge of the Student Guidance program designed to train interested applicants in the field of Camera Craftsmanship entirely by correspondence. All school activities are now centralized in the new school plant located in Englewood, Colorado.

## OUR STUDENTS SPEAK.....

Read what current students are writing to the School about their NCRS Camera Repair Training. We'd like to hear from you, too. Mail the Editor your comments and suggestions for improvements in the Training, Service and Supply Departments and we'll print them in a later issue of your "Camera Craftsman".

## OUR STUDENTS SPEAK (continued)

... "Since beginning the NCR course I've developed a great feeling of self-satisfaction and security to be able to repair, disassemble and assemble complicated photo equipment. I've repaired a few cameras and exposure meters with good results and satisfied customers. Thanks again to NCRS!.....E. D. Sokolowski, Penna.

... I found lesson 10 very interesting and I'm devoting time profitably in the study of disassembly and assembly of both model shutters furnished with the lesson.....C. J. Wild, Ohio

## NCRS PRINT SHOP PRICE LIST

### NCRS PRINT SHOP PRICE LIST:

The following SALES-AIDS are available at COST PRICE to Students from the NCRS Print Shop fab Denver. All printed material is distinctly designed for use in your ServiShop bearing the Imprint of the National Organization. All Imprinted forms carry YOUR FULL NAME AND ADDRESS. Be sure to attach accurate "COPY" with your order for Imprinted material.

DESCRIPTION	IMPRINTED	SIZE	QUANTITY 500	QUANTITY 1000	QUANTITY 2000
STATIONERY Two colors 20 lb. Bond	X	8 1/2 X 11	8.20	12.10	20.70
Business ENVELOPES Two colors	X	9 1/2 X 4	7.50	13.50	23.30
INVOICES	X	8 1/2 X 7	6.40	10.50	18.70
Window ENVELOPES	X	6 1/2 X 3 1/2	6.50	11.40	23.30
Servishop BUSINESS CARDS	X	2 3/4 X 4	3.00	4.50	7.60
Servishop BUSINESS CARDS		2 3/4 X 4	1.50	2.50	4.40
WORK ORDER Post Cards		3 1/4 X 5 1/2	5.00	7.50	13.40
Servishop PRICE LISTS	X	8 1/2 X 12	12.00	20.50	36.40
Servishop PRICE LISTS		8 1/2 X 12	10.00	17.50	31.70
REPAIR TAGS	X	3 X 6	7.00	9.75	17.60
REPAIR TAGS		3 X 6	5.00	7.50	13.40
Repair RECORD FORMS - punched and padded			One pad: 50 Recds. 1.00	Five pads: 50 each 3.75	
Gummed PARCEL POST LABELS	X	2 1/2 X 4		5.95	10.70

## The Director's Viewpoint

BY SAMUEL L. LOVE . . . . .

Which comes first, the theory or the practice? Can you get along without one or the other? With a fair set of instructions, and a two hour bout with any shutter, chances are that you could disassemble and reassemble it correctly and repeatedly. If the shutter worked when you started, and if you followed the instructions properly, chances are good that it will work after you finish.



But what would then happen when you are confronted with a shutter of exactly the same type and model that has a malfunction? It is very likely that you would be up against a blank wall! UNLESS, during your practical work of disassembly and reassembly you have also learned how each part operates, and why it functions as it does. That is theory. After a long time - after many disassemblies and reassemblies - theory just sinks in. Unconsciously, whether you want to or not, you will learn the hows and the whys of a mechanism, IF you gather enough practical experience. With the use of good instruction, you eliminate much of the time-consuming work necessary to become a top craftsman. With such instruction you are reaping the benefits of someone else's experience!

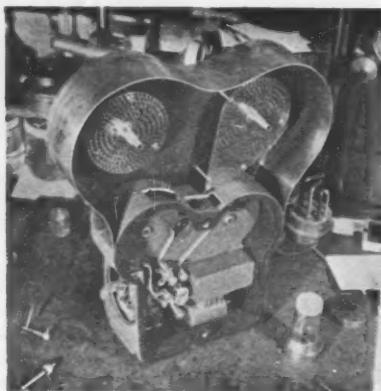
To get the most from your Training Program, learn the theory as you learn the practical portion of your studies. The dexterity needed to take the machine apart arrives after repeated use of your fingers. The skill needed to REPAIR the machine arrives after repeated use of your brain.



Vacation travellers planning to visit Colorado this summer are cordially invited to visit the School in Englewood. Remember you are always welcome at the Home Office. Visitors and their guests are invited to inspect the School Operations at the new NCIS School Building located at 2040 West Union Ave. in Englewood any day except Sunday.

# Project of the Month!

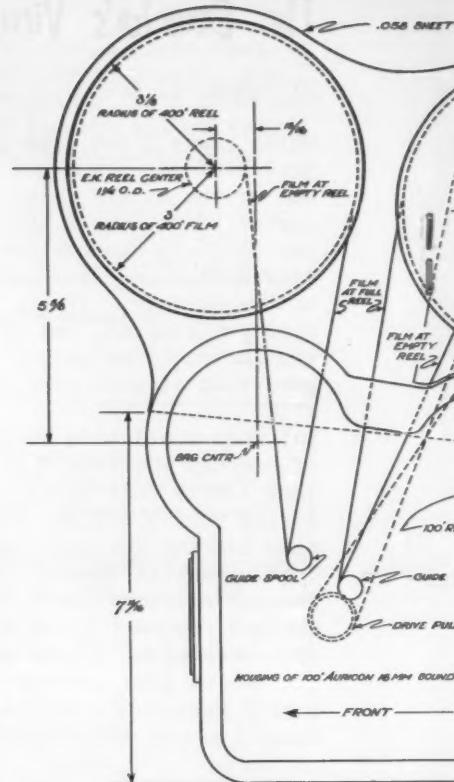
Submitted by:  
HAROLD S. FOSTER  
Salt Lake City, Utah



THE WORK IN PROCESS



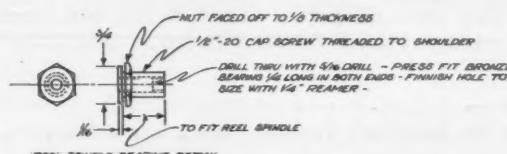
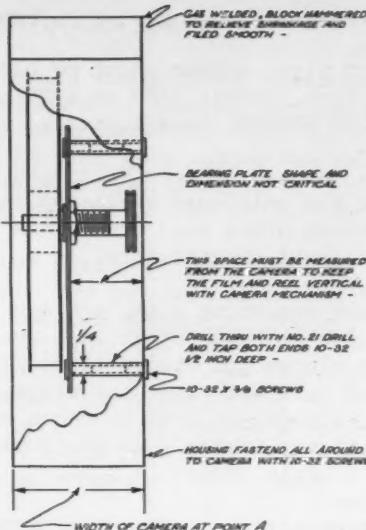
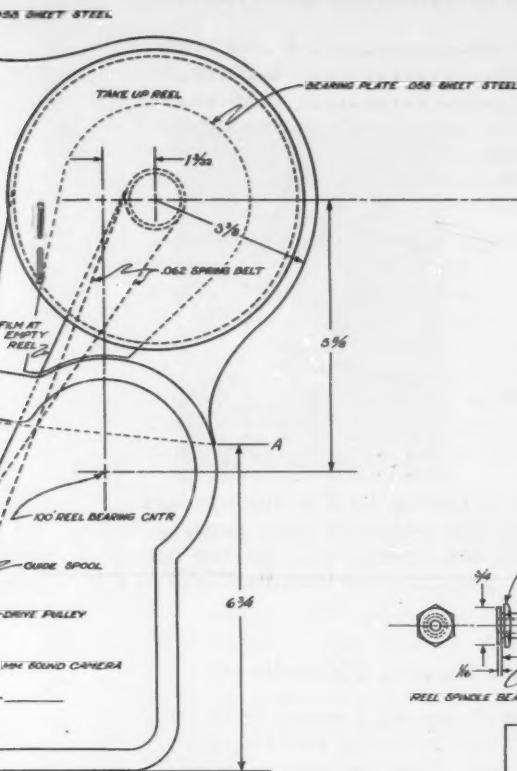
THE FINISHED JOB



THE WORK

This repair Project called for increasing the film capacity of an AURICON 16 mm projector from a 100 foot film capacity to a 400 foot film capacity. The original drawings, work in process, and final drawings are illustrated.

Mr. Foster commented that the repair Project called for his entire NCRS Camera to be modified. He adds that it takes patience, a good knowledge of measuring and an "awful" lot of time to repair your first customer's camera.



METHOD OF LAYOUT AND LOCATION  
TO CONVERT 100' AURICON CAMERA  
TO 400' CAMERA -  
HAROLD S. FOSTER

## WORK DRAWINGS

llled for converting the magazine 16 mm Sound Camera from a 100 a 400 foot capacity. The orig- process and finished job are

hat the job will more than pay hera Repair Course. Mr. Foster ience, quite a bit of careful 1" lot of nerve to saw into camera.



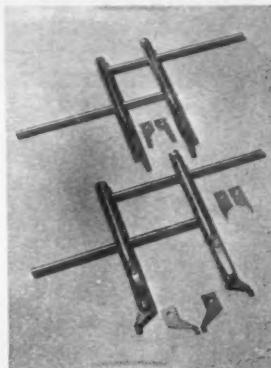
Editor's Note: Congratulations, Mr. Foster. Your Credit Reward Slip is in the mail. Keep up the excellent work!

**NOW AVAILABLE . . . . . Extra Tips for your MultiSpan Wrench**

Straight Tips, either point or blade type.....	\$1.40 pr.
Offset Tips, either 3/8" or 1/2" offset.....	1.60 pr.
MULTISPAN WRENCH, Less Tips.....	8.50 ea.

A big advantage of your MultiSpan Wrench is that the only part which may require replacement after hard use is the inexpensive, heat treated tips.

By simply replacing tips, you can use the wrench to reach other wise inaccessible places and handle difficult types of nuts and retaining rings. The offset tips can be used to reach around obstructions, making your MultiSpan Wrench a truly versatile tool.



The inexpensive tips may be altered by grinding to fit any special case which you may come across. Keep a few pairs of tips handy to rework for unusual jobs. Your MultiSpan Wrench will be one of your most prized Camera Repair Tools. Designed and manufactured by NCRS.

**Extra Blades for Jeweler's Screwdrivers . . . . . 20¢ each**

Your replaceable blade Jeweler's Screwdrivers will never wear out. Keep the blade tips ground square and true to avoid marring screw heads. Always use the tip size that just fits the screw being removed or driven. An extra set of blades will assure that you will always have the right blade available for the job on hand.

**● NEW CAMERA REPAIR PRICE LIST PUBLISHED**

A new Price List for every variety of Camera Repairwork has been prepared by the NCRS Repair Department. Copies are available without charge for all NCRS students. If you have not as yet received your copy of the new Price List please notify your Instructor and your copy will be sent to you. Additional copies with your name imprinted are available at cost price. The charges quoted on the new List are the suggested retail customer's final charge, allowing you to freely Post the list for your customer's examination. All students and graduates of NCRS receive a special discount on all repair work sent to the school.

## QUALITY VS. QUANTITY OF SCHOOLWORK SUBMITTED:

The final effectiveness of our School Assignments is not based on the speed with which a given number of lessons are completed but rather with the thoroughness with which they are understood and mastered. It is far better to work each lesson assignment over several times to insure complete understanding of the skills involved than to rush on from one lesson to the next.

The psychologists have proven that simply to do a job once does not imply the mastery of a skill. The job must be repeated over and over until the operation becomes an automatic process. Only then can we say the student has mastered the skill. Repeat the lesson assignment several times until you are sure you understand the work thoroughly and can do the job automatically. Complete both the practical work and the written work for each lesson before you go on to the next lesson. The skills of each lesson should be mastered before you tackle the next assignment.

Our selection of the "Outstanding Student of the Month" is based on the quality of the finished lessons rather than the quantity of the lessons submitted.

The lessons are graded for thoroughness, accuracy and attention to details. Work that is dashed off in a careless hurry will be returned to be reworked by the student with greater care. This is done only to insure the mastery of the skills required by our students to enable them to become successful camera repairmen.

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## NEW SERVISHOP SIGNS AVAILABLE .....

A very attractive little Sign bearing the insignia of the NATIONAL CAMERA SERVISHOPS has been prepared by the Repair Department and are now available for distribution. Place these neat signs in the corner or your Shop Window or showcase or in your front window at home.

A card placed in the side window of your automobile is oftentimes effective advertising. These new signs announce that Expert Camera Repair Service is available and that you are the Local Authorized Agent for the National Camera Repair ServiShops. If you have not as yet received your free Signs or can use a few additional copies please write to your Repair Department.



## SPECIAL

**This Month Only**

### ELECTRONIC SOLDERING GUNS



**MODEL No. 250**

#### HEAVY DUTY 250 Watt GUN

Just pull the trigger and in three seconds this Electronic Soldering Gun is hot and ready to do your soldering job. Because the tip is part of the electronic element it produces heat instantly and in great volume. Designed to solder in tight corners. Operates on 120 V.A.C. 60 cycles. Shipping weight  $3\frac{1}{4}$  lbs.

List Price \$12.95

YOUR PRICE.....9.30

You Save.....3.65

#### GENERAL PURPOSE GUN

This smaller and lighter electronic soldering Gun weighs only  $1\frac{1}{2}$  pounds. Designed with a new type long nose attachment with a special long life tip. Melts solder in  $2\frac{1}{2}$  seconds. Built in spotlight automatically illuminates work. Ideal for solder-flash wires, connections, light gauge metals, etc. Operates on 120 V.A.C. 60 cycles. Shipping weight  $2\frac{1}{2}$  lbs. Extra tips are available.



**MODEL No. 199**

List Price \$7.95

YOUR PRICE.....5.60

You Save.....2.35

#### STUDENT SPECIAL "KIT" OF THE MONTH:

KIT #6551B

Individual Value \$26.40

Assortment of

YOUR PRICE 15.70 f.o.b.

CAMERA BELLows.....

You Save 10.70 Denver

This popular BELLows KIT contains eleven (11) different sized Bellows in the most frequently required shapes and sizes. These replacement Bellows will fit almost all popular size camera with a simple exchange of frames. Sizes include 127, 120, 620, 116, 616, 130 and 122. Stock up now at this special savings, while the present stock lasts.

## Build Your TECHNICAL CAMERA LIBRARY

The publishers' have extended to NCRS Students an additional 10% discount from these Listed Priced on all Photographic Textbooks. Now is a good time to get started building your library at these special reduced prices. All books are shipped FOB, Denver.

### New Edition Book Price List

Elementary Photography by Quarles.....	\$5.50
COLOR, "How to See and Use it" by Fred Bond.....	8.75
Photographic Enlarging & Print Quality by Lootens.....	.50
The Female Figure by Mortensen.....	1.00
Flash Photography by Parks.....	1.00
Feininger on PHOTOGRAPHY.....	6.95
"Strobe" The Lively Light by H. Luray.....	4.00
LENS in PHOTOGRAPHY by Kingslake.....	2.95
COMMERCIAL PHOTOGRAPHY by Keppler.....	1.00
Photographic Facts & Formulas by Wall & Jordan.....	4.00
CAMERA REPAIRMAN'S HANDBOOK New Edition	

Edited by the NCRS Staff Paper Bound..... 5.95  
Hard Cover..... 7.50

Order your periodicals and technical publications through your NCRS Supply Department and take advantage of the Special Students Discount Rates.

If you have a friend or relative who may be interested in the money making opportunities that exist today in the camera repair field, have him or her fill out this coupon and mail it to the National Camera Repair School, Box 174, Englewood, Colorado.

National Camera Repair School  
Box 174, Englewood, Colorado

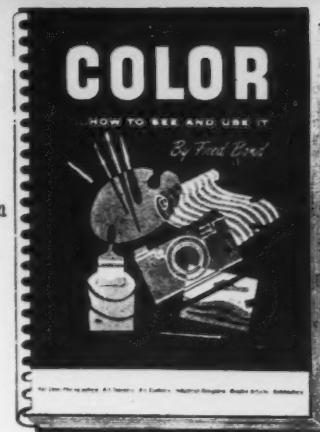
I am interested in the opportunities and advantages of a career in Camera Craftsmanship. Please furnish me with complete information about your training program.

Name \_\_\_\_\_ Age \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

REQUEST  
FOR  
INFORMATION



## GET YOUR "DREAM SHOP" STARTED.....

Are you anxious to get your Camera Repair Shop organized and start the flow of Repair Jobs that will result in Extra Income? Then begin soliciting Repair Work NOW from all Retail Photo, Camera and Pawn Shops in your neighborhood. Establish a "Route" and cover it regularly in person or by mail. Get your name known and publicized around town as the local NCRS Camera Repairman. Mail and pass your business cards among your friends and acquaintances and get people talking about your new Camera Repair Activities. Of course in the beginning the more difficult repair jobs can be sent in to the School's Repair Department for the necessary work. This work will be done promptly for you at special student-discount prices. You can continue to send such work to the School for repairs until you are able to do all the repair work yourself. In this way you will actually begin to handle the various camera jobs early in your career and quickly begin to familiarize yourself with the various types of camera malfunctions. And most important you will begin to EARN real money while you're still learning your specialized skills.

Plan NOW to get your Camera Repair Route started soon!



NATIONAL CAMERA REPAIR SCHOOL

Box 174  
Englewood, Colorado

### THE CAMERA CRAFTSMAN



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Editor  
Chairman  
Art, Editor  
Margaret Snyder  
Art Director

Box 174  
Englewood, Colorado

Published for  
students, graduates  
and friends of  
The National Camera  
Repair School

NATIONAL CAMERA REPAIR SCHOOL

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